

X magnitude varies for an application depending on the intended use and the distance from the anode structure 30 to the emitter 50. For instance, with anode structure 30 being a recordable medium for a storage device,  $V_a$  might be chosen to be between 500 and 1000 Volts. The lens 28 focuses the electron emission 16 by forming an electric field 34 within its aperture. By being set at a proper voltage from  $V_e$ , the electrons emitted from the emitter 50 are directed to the center of the aperture and then further attracted to the anode structure 30 to form the focused beam 32.

A2 10 Please replace the two paragraphs beginning on Page 10, line 3 with the following:

Fig. 11K illustrates the application of a cathode photoresist layer 116 that has been applied and patterned to define openings where the cathode layer 14 is to be etched to isolate multiple emitters on the substrate 10. Fig. 11L illustrates the cathode layer 14 after it has been etched and the cathode photoresist 116 removed. Within the emitter chamber 114 is the emitter surface 86. An exemplary top view of the resulting structure is shown in Fig. 8. The emitter surface 86 has a first area. The emitter chamber 114 has a first chamber section 20 interfacing to the emitter surface 86 that has substantially parallel sidewalls 81 within the adhesion layer 80. The emitter chamber 114 has a second chamber section formed in the conductive layer 82 that has sidewalls 83 that diverge to an opening having a second area. The second area is larger than the first area. The cathode layer 14 is disposed on the emitter surface 86 and the sidewalls (81,83) 25 of the first and second sections of the emitter chamber 114. By using integrated circuit thin film technology to fabricate the emitter, it can be integrated along with traditional active circuits found on conventional integrated circuits. The integrated circuit with the emitter can be used in display devices or storage devices as previously described. Preferably, after fabrication, the emitter is subjected to an 30 annealing process to increase the amount of emission from the emitter.

Fig. 12A and 12B are charts of exemplary annealing processes which are used to increase the emission current capability of an emitter embodying the invention. The annealing process also increases the device yields and quality by